CLAIMS:

5

1.   A data switch comprising:

an input port for receiving a connection request;

means for identifying a protocol associated with the connection request;

means for dynamically bonding the identified protocol to the input port;

10   means for receiving a data block from a layer three interface; and

means for adding encapsulation information to the data block, the encapsulation information being associated with the identified protocol.

15

2.   The data switch of claim 1 further comprising a cache for storing the encapsulation information.

3.   A data switch comprising:

20   means for establishing a first connection on a port;

means for creating a port interface (PIF) object for the port;

means for detecting a first protocol of the connection;

means for bonding the first protocol to the PIF;

25   means for receiving a data block on the port; and

means for forwarding the data block to a destination address.

4.   The data switch of claim 3 further comprising:

30   means for establishing a second connection on the port;

means for creating a second port interface (PIF) layer for the port;

means for detecting a second protocol of the connection;

means for bonding the second protocol to the second PIF;

35   means for receiving a second data block on the port; and

means for forwarding the second data block to a second
destination address.

5

5.   A method for forwarding data blocks comprising:
receiving a connection request;
identifying a protocol associated with the connection
request;
10   dynamically bonding the identified protocol to the input
port;
receiving a data block from a layer three interface; and
adding encapsulation information to the data block, the
encapsulation information being associated with the identified
15   protocol.

6.   The method of claim 5 further comprising storing the
encapsulation information in a cache.

20   7.   A method for forwarding data blocks comprising:
establishing a first connection on a port;
creating a port interface (PIF) object for the port;
detecting a first protocol of the connection;
bonding the first protocol to the PIF;
25   receiving a data block on the port; and
forwarding the data block to a destination address.

8.   The method of claim 7 further comprising:
establishing a second connection on the port;
30   creating a second port interface (PIF) layer for the port;
detecting a second protocol of the connection;
bonding the second protocol to the second PIF;
receiving a second data block on the port; and
forwarding the second data block to a second destination
35   address.